

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions,
and listings, of claims in the application:

LISTING OF CLAIMS:

1-20 (canceled).

21. (new) A packet switched communication network comprising a central node (10) and a plurality of network nodes (20) connected to said central node by a shared medium (100), wherein,

traffic data is transmitted from said network nodes to said central node over said shared medium in time slots allocated by said central node, said central node including scheduling means (30, 40) for allocating permits to a service carried by at least one network node,

said scheduling means includes a plurality of sequentially accessible storage cells (31, 42) each cell corresponding to a transmission time slot on said shared medium and being programmed with markers corresponding to delay sensitive traffic services,

the number of sequentially accessible cells separating a marker for the same traffic service defines a predetermined

scheduling interval essentially corresponding to the frame length of the traffic service in terms of time slots, and

 said central node is arranged to consult said storage cells in succession to determine whether a marker designating a delay sensitive traffic service is present and for allocating a time slot to a network node carrying a delay sensitive traffic service if a marker corresponding to said traffic service is present in a consulted cell.

22. (new) A network as claimed in claim 21, wherein,
 said central node further comprises queue recording means (11) for storing the packet queue size of non-delay sensitive traffic awaiting transmission at said network nodes,
and

 said central node is adapted to issue a permit to a non-delay sensitive traffic service on the basis of said queue record when no marker is present in a consulted cell of said storage means.

23. (new) A network as claimed in claim 21, wherein,
 said scheduling means (31, 42) is arranged to be accessed cyclically.

24. (new) A network as claimed in claim 21, wherein, the number of cells included in said scheduling means (30) is at least equal to the multiple of different frame lengths in terms of time slots of the scheduled traffic.

25. (new) A network as claimed in claim 21, wherein, said scheduling means (40) comprises several cyclical schedulers (41), and

each cyclical scheduler is programmed with scheduling markers relating to traffic services having the same scheduling interval in terms of time slots, the cells of each scheduler that correspond to the same time slot being accessible in turn.

26. (new) A network as claimed in claim 25, wherein, each scheduler has a length in cells (42) that is equal to the scheduling interval in terms of time slots of the scheduled traffic services.

27. (new) A network as claimed in claim 25, wherein, said central node is arranged to issue a permit to more than delay sensitive traffic service in succession when said central node determines that markers for more than one delay sensitive traffic services are present in the cell (42) corresponding to the same time slot in more than one scheduler (41).

28. (new) A node in a packet switched communication network for controlling the transmission of data packets from a plurality of network nodes (20) over a shared medium (100) by allocating transmission time slots to said network nodes, said node comprising:

scheduling means (30, 40) for allocating permits to a service carried by at least one network node, wherein,

said scheduling means includes a plurality of sequentially accessible storage cells (31, 42) each cell corresponding to a transmission time slot on said shared medium and being programmed with markers corresponding to delay sensitive traffic services,

the number of sequentially accessible cells separating a marker for the same traffic service defines a predetermined scheduling interval essentially corresponding to the frame length of the traffic service in terms of time slots, and

a controller arranged to consult said storage cells in succession to determine whether a marker designating a delay sensitive traffic service is present, and for allocating a time slot to a network node carrying a delay sensitive traffic service if a marker corresponding to said traffic service is present in a consulted cell.

29. (new) A node as claimed in claim 28, further comprising:

queue recording means (11) for storing the packet queue size of non-delay sensitive traffic awaiting transmission at said network nodes (20),

wherein said node is adapted to issue a permit to a non-delay sensitive traffic service on the basis of said queue record when no marker is present in a consulted cell of said storage means.

30. (new) A node as claimed in claim 28, wherein, said storage cells (31, 42) are arranged to be accessed cyclically.

31. (new) A node as claimed in claim 28, wherein, the number of cells included in said scheduling means (30) is at least equal to the multiple of different frame lengths in terms of time slots of the scheduled traffic.

32. (new) A node as claimed in claim 28, wherein, said scheduling means (40) comprises several cyclical schedulers (41), wherein each cyclical scheduler is programmed with scheduling markers relating to traffic services having the same scheduling interval in terms of time slots, the cells of each

scheduler that correspond to the same time slot being accessible in turn.

33. (new) A node as claimed in claim 32, wherein, each scheduler (41) has a length in cells (42) that is equal to the scheduling interval in terms of time slots of the scheduled traffic services.

34. (new) A method of controlling the transmission of delay sensitive and non-delay sensitive traffic from a plurality of network nodes (20) to a central node (10) over a shared medium (100), comprising the step of traffic being transmitted from said network nodes to said central node in time slots in response to permits issued to said network nodes by said central node, with the steps of

providing a scheduler defining a predetermined scheduling interval for at least one delay sensitive traffic service, and

prior to issuing a permit, consulting said scheduler to determine if a predetermined scheduling interval has elapsed, wherein,

if at least one interval has elapsed, issuing a permit enabling transmission to a network node carrying a delay sensitive traffic service, and

if no interval has elapsed, issuing a permit enabling transmission to a further network node carrying a non-delay sensitive service on the basis of stored queue size information relating to non-delay sensitive traffic awaiting transmission at said further node.

35. (new) A method as claimed in claim 34, comprising the further step of

for each delay sensitive traffic service, adapting the predetermined scheduling interval to the frame length of the traffic service.

36. (new) A method as claimed in claim 34, wherein, if the scheduling interval for more than one traffic service has elapsed, allocating consecutive time slots to the scheduled traffic services on the basis of prioritizing information relating to the traffic services.

37. (new) A method as claimed in claim 35, wherein, if the scheduling interval for more than one traffic service has elapsed, allocating consecutive time slots to the scheduled traffic services on the basis of prioritizing information relating to the traffic services.

38. (new) A method as claimed in claim 34, wherein, if the scheduling interval for more than one traffic service has elapsed, allocating time slots to the scheduled traffic services with alternating priority.

39. (new) A method as claimed in claim 35, wherein, if the scheduling interval for more than one traffic service has elapsed, allocating time slots to the scheduled traffic services with alternating priority.